

Title: Incorporating usage data to identify areas where pesticide exposure to listed species is most likely to occur

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Abstract: The United States (US) Environmental Protection Agency registers uses of pesticides in the US and its territories. As such, a national level registration of a pesticide may have potential exposure to large portions of the ranges of endangered and threatened species. For registrations that apply to agricultural uses (*e.g.*, corn, apples), the US Department of Agriculture's cropland data layer (CDL) can be used to identify potential pesticide use sites in the 48 conterminous states. Additional data are also available to identify where a pesticide has been applied (termed "usage" data). Combining usage data with CDL landcovers can help identify areas where pesticide applications are most likely to occur. Subsequently, likely use sites can be compared with listed species ranges to determine the most likely proportion of the species range or population that may be exposed. One major challenge to this approach involves fitting data from different scales. Combining these data requires some assumptions related to distributions of sites where the pesticide is applied relative to the species range. This presentation will discuss some of the benefits and challenges of incorporating usage data into risk assessments and some options to overcome the challenges.

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